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10/679,750	10/06/2003	Martin S. Maltz	D/A3170	2814

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BASCH & NICKERSON LLP  
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EXAMINER
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KASSA, HILINA S

ART UNIT	PAPER NUMBER
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2625

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12/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding:**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/679,750

Applicant(s)

MALTZ, MARTIN S.

Examiner

Hilina S. Kassa

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. The amendment to claims and specification filed on 10/20/2007 has been acknowledged.

### *Response to Arguments*

2. Applicant's arguments filed 10/20/2007 have been fully considered but they are not persuasive.

With respect to Applicant's argument:

(a) **“moving a subset of points belonging to the set of first control points along the first smoothed curve”**

In response to argument **“moving a subset of points belonging to the set of first control points along the first smoothed curve”**, Donaldson et al. teach moving of test patch points for the purpose of measuring the density of the points in the background of invention in (column 1, lines 39-47). Also, Donaldson et al. disclose the first control points which are considered as the model tone reproduction curve by adding the model deltas to values from the target tone reproduction curve (column 8, lines 17-19; lines 55-57). The addition of the model deltas is effective enough to change or move the subset of points with in

the model tone reproduction curve. Therefore, even though the Donaldson et al. reference disclose this specific limitation as delta values, the Examiner would like to point out that the overall scope of the limitation has been disclosed.

**(b) “generating a second set of control points comprising the moved first control points and the remaining unmoved first control points”**

In response to argument **“generating a second set of control points comprising the moved first control points and the remaining unmoved first control points”**, Donaldson et al. teach generating a new tone reproduction curve as considered to be a second set of control points. It is also disclosed in the program stated in the disclosure (column 7, lines 45-63) that the new tone reproduction curve gets generated by comparing the model tone reproduction curve to the target tone reproduction curve (column 8, lines 57-59). As stated in the program the model tone reproduction curve is the addition of the target tone reproduction curve and the model delta. Therefore, even though the Donaldson et al. reference discloses this specific limitation as the new tone reproduction curve comprises the model delta (moved points) and the target reproduction curve (unmoved points), the Examiner would like to point out that the overall scope of the limitation has been disclosed.

**(c) “fitting a second smoothed curve to said second set of control points”**

In response to argument **“fitting a second smoothed curve to said second set of control points”**, Donaldson et al. teach modifying the new tone reproduction curve LUT by performing for each entry the new tone reproduction curve LUT (column 8, lines 62-64). Therefore, the Examiner would like to point out that the overall scope of the limitation has been disclosed.

(d) **“determining a differential function between the first and second fitted curves”**

In response to argument **“determining a differential function between the first and second fitted curves”**, Donaldson et al. teach the differential function between the previous tone reproduction curve value and the new tone reproduction curve value to predetermined maximum change value (column 7, lines 24-30). Therefore, the Examiner would like to point out that the overall scope of the limitation has been disclosed.

(e) **“adding the difference to the original curve to produce a smoothly modified last curve, which retains the original curve’s characteristics”**

In response to argument **“adding the difference to the original curve to produce a smoothly modified last curve, which retains the original curve’s**

**characteristics”**, Donaldson et al. teach adding the maximum change value and the original tone reproduction curve to acquire the new tone reproduction curve (column 7, lines 30-33). Also, the new tone reproduction curve replaces the current tone reproduction curve (column 9, lines 15-16). Therefore, the Examiner would like to point out that the overall scope of the limitation has been disclosed.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Donaldson et al. (US Patent Number 6,694,109 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

**(1) regarding claim 1:**

As shown in figures 1-6, Donaldson et al. disclose, a method for compensating for printer characteristics having a tone reproduction curve which is either too rough to be fitted by interpolation or which does not have a simple parametric function (column 3, lines 15-35), comprising:

a) placing a first set of control points on said tone reproduction curve (column 5, lines 41-43; column 8, lines 7-9);

b) fitting a first smoothed curve to said first set of control points (column 5, lines 44-46; column 8, lines 12-16);

c) moving a subset of points belonging to the set of first control points along the first smoothed curve (column 1, lines 39-47; column 8, lines 17-19; lines 55-57);

d) generating a second set of control points comprising the moved first control points and the remaining unmoved first control points (column 7, lines 45-63; column 8, lines 57-59);

e) fitting a second smoothed curve to said second set of control points (column 8, lines 62-64);

f) determining a differential function between the first and second fitted curves (column 7, lines 24-30); and

g) adding said difference to the original curve to produce a smoothly modified last curve, which retains the original curve's characteristics (column 7, lines 30-33; column 9, lines 15-16).

**(2) regarding claim 2:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 1, wherein said first set of control points are placed on said original curve such that each point is representative of the behavior of the curve in the vicinity of the point (column 8, lines 7-9).

**(3) regarding claim 3:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 1, wherein the movement first control points indicates a desired change in that region of the curve of the original function (column 8, lines 12-15).

**(4) regarding claim 4:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 1, wherein the first smooth curve is represented by a



parametric spline fitted through the first set of control points wherein  $X$  and  $Y$  are smooth spline functions of  $T$  passing through  $X_i(T_i)$  and  $Y_i(T_i)$ , where  $i$  is a control point index (column 6, lines 28-35).

**(5) regarding claim 5:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 4, wherein the movement of control points to a new position is by changing point  $j$  at  $X_j(T_j)$  and  $Y_j(T_j)$  to  $X'_j(T_j)$  and  $Y'_j(T_j)$  (column 7, lines 45-50).

**(6) regarding claim 6:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 5, wherein the fitting of the second smooth curve through the second set of control points is represented by  $X'(T)$  and  $Y'(T)$  (column 7, lines 45-60; note that the second curve has parameter  $j$ . As shown in the program, the parameter is along a vertical and horizontal axis).

**(7) regarding claim 7:**

Donaldson et al. further disclose, a method for compensating for printer characteristics, as in claim 6, wherein the difference between curves is represented by:

$$x'(T)=x(T)+X'(T)-X(T)$$

$$y'(T)=y(T)+Y'(T)-Y(T)$$

where T is the distance along curve (x,y) and not along curve (x',y'). (column 7, lines 45-64; note that if  $\text{NewTRC}(i) - \text{OldTRC}(i) > \text{MaxChange}$ , then  $\text{NewTRC}(i) = \text{oldTRC}(i) + \text{MaxChange}$ ; note that the new TRC equals the current TRC plus the value of a predetermined maximum change between the target TRC and the model delta)

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Engeldrum et al. (US Patent Number 6,847,376 B2)** disclose an invention that provides a technique for modeling the tone reproduction curve of a flat panel screen such as an LCD.

**Hersch et al. (US Publication Number 2004/0233463 A1)** disclose methods and systems for printing by superposing a metallic ink and transparent inks.

**Harrington (US Patent Number 5,347,369)** discloses a method for calibrating a printer determines a tone reproduction curve for the printer.

**Ikegami (US Patent Number 5,337,166)** discloses a color signal transforming apparatus of the type in which three or four input signals are each divided into higher bits and lower bits, and output signals are formed by calculating basic data obtained

from the combinations of the higher bits and the combination of interpolation data obtained from the combinations of the higher bits and lower bits.

**Scheuer (US Patent Number 6,697,582 B1)** discloses dynamic control patches for better tone reproduction curve.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb could be reached at (571) 272- 7406.

**Any response to this action should be mailed to:**

Application/Control Number:  
10/679,750  
Art Unit: 2625

Page 11

Commissioner of Patent and Trademarks

Washington, D.C. 20231

**Or faxed to:**


(703) 872-9314 (for Technology Center 2600 only)


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service Office  
whose telephone number is (703) 306-0377.

Hilina Kassa

December 14, 2007



  
TWYLER LAMB HASKINS  
SUPERVISORY PATENT EXAMINER